# 6138270

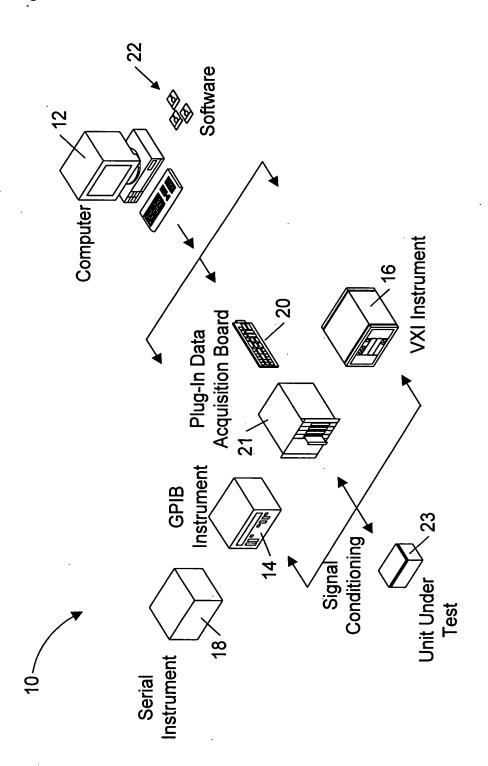
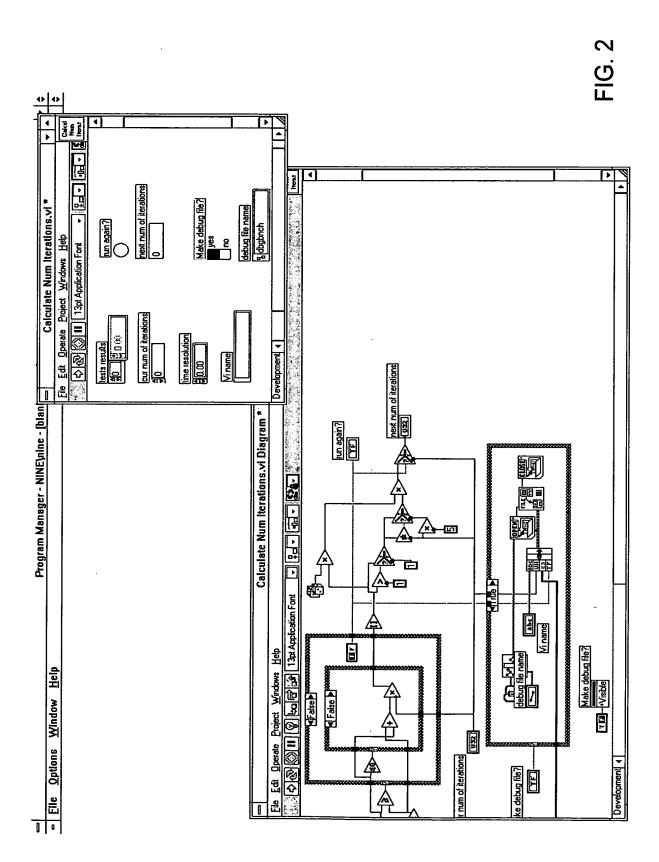


FIG. 1

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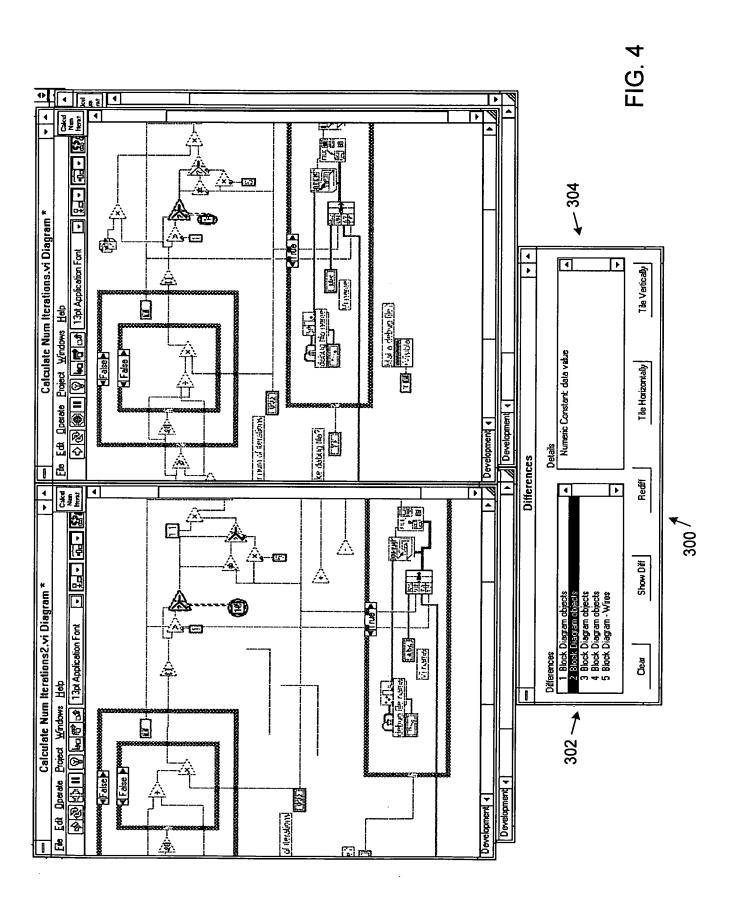
GOTTOO. DAROTEGO

APPAOVED	O.G. FIG.		
BY	CLASS	SUBCLASS	
DRAFTSMAN			

Receive as input two graphical programs; the graphical programs comprise attributes and a plurality of objects arranged as a block diagram and a user interface panel 100 Create a graph representing the block diagram and a graph representing the front panel for each of the two graphical programs Match objects of the first graphical program with objects of the second graphical program 104 Determine differences between the block diagrams of the first and second graphical programs 106 Determine differences between the user interface panels of the first and second graphical programs Determine differences between the attributes of the first and second graphical programs Display the differences between the first graphical program and the second graphical program 112

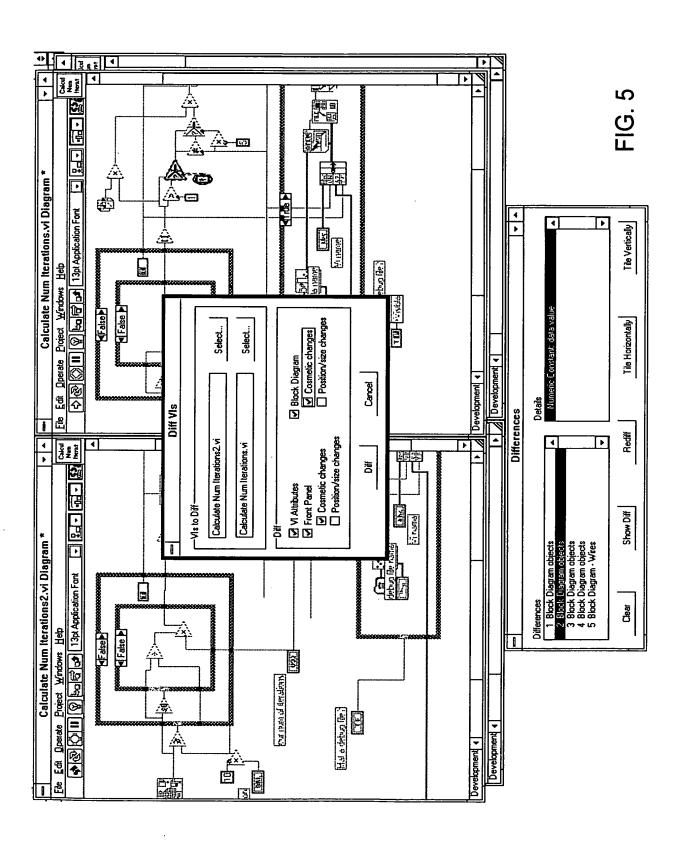
FIG. 3

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COMMON DAMONEO

5/11



COURSE. CARSES

APPROVED	O.G. FIG.		
BY	CLASS	SUBCLASS	
DRAFTSMAN			

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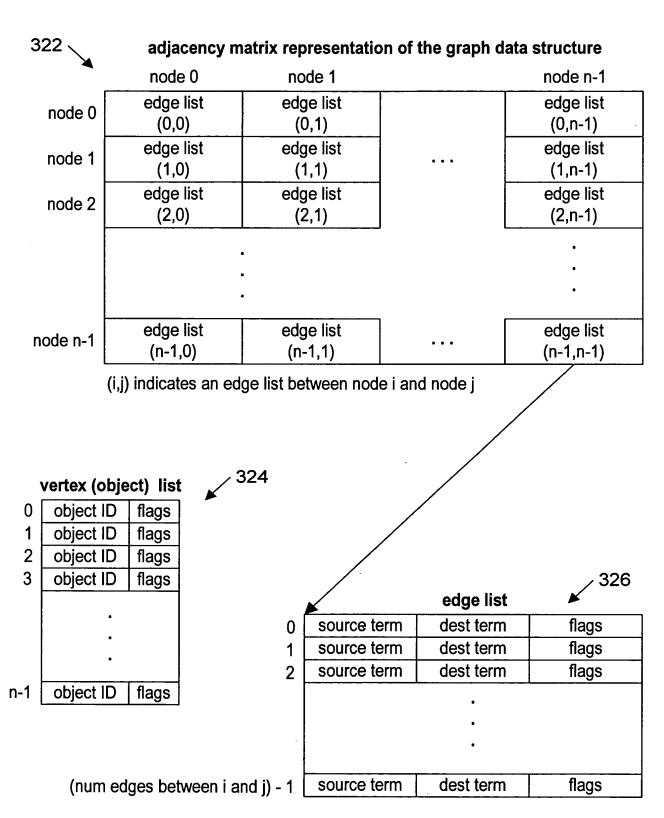


FIG. 6

GOTTO OPTOTO

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#### n x m matrix list

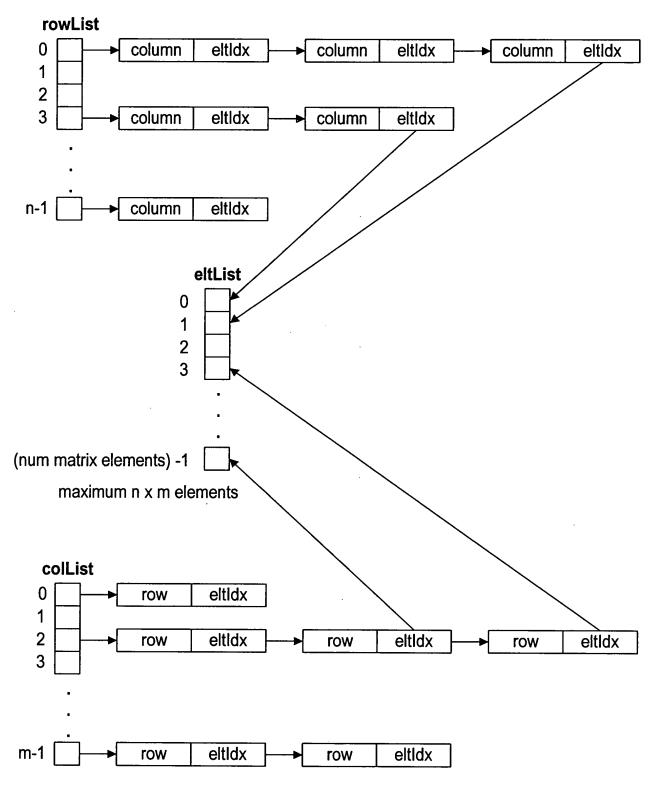


FIG. 7

APPROVED	O.G. FIG.		
BY	CLASS	SUBCLASS	
DRAFTSMAN			

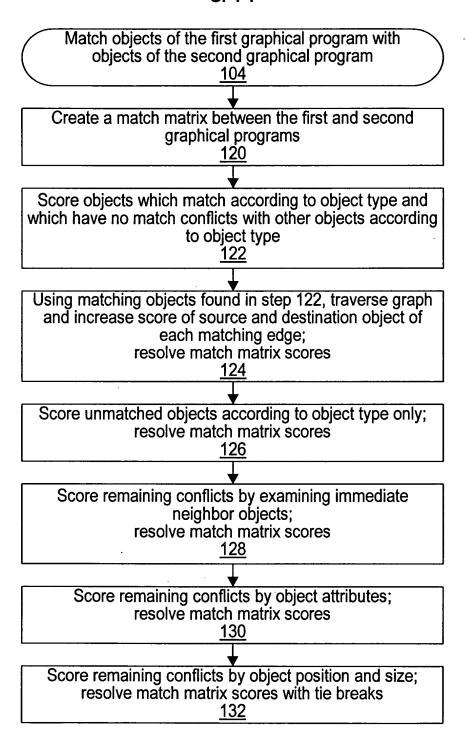


FIG. 8

COMMONO.OPECO

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### n x m match matrix

	object 0	object 1		object m-1
object 0	match info (0,0)	match info (0,1)		match info (0,m-1)
object 1	match info (1,0)	match info (1,1)	•••	match info (1,m-1)
object 2	match info (2,0)	match info (2,1)		match info (2,m-1)
·				•
				•
object n-1	match info (n-1,0)	match info (n-1,1)	<u></u>	match info (n-1,m-1)

## match info (i,j)

FIG. 9

PPROVED O.G. FIG.

BY CLASS SUBCLASS

RAFTSMAN

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Determine differences between the block diagrams of the first and second graphical programs <u> 106</u> Group exact matching objects into a list of exact matching subgraphs using the match matrix information of step 104 140 Group remaining objects into a list of non-exact matching subgraphs using the list of exact matching subgraphs **142** Match the lists of non-exact matching subgraphs using a match matrix by computing scores based upon matching nodes in match matrix of step 104 144 Merge the two lists of non-exact matching subgraphs using the match matrix of step 144 to produce a composite non-exact matching subgraph 146 Store non-exact matching subgraphs in a results data structure 148 Compare matching objects in the non-exact matching subgraphs to determine additional differences 150 Store the additional differences in the result data structure 152

FIG. 10



Determine differences between the user interface panels of the first and second graphical programs

108

Compare matching top-level objects to determine differences
160

Compare low-level objects to determine differences
162

Determine differences of objects which have no match
164

Store differences found in steps 160, 162 and 164
166

FIG. 11

GOMMOD. DAMOMMOD